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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/992,064	11/21/2001	Ashley Saulsbury	016747-015500US	4869

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EXAMINER

DO, CHAT C

ART UNIT

PAPER NUMBER

2124

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/992,064	Applicant(s) SAULSBURY ET AL.	
	Examiner Chat C. Do	Art Unit 2124	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/21/01; 02/04/02; 04/12/02.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>04/12/02</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

The applicant is advised to update information cited in the "cross-references to related applications" section in the present application.

Appropriate correction is required.

Claim Objections

2. Claim 7 is objected to because of the following informalities:

The applicant is advised to amend claim 7 to depend on claim 6 because "the value" is cited in preceding claim 6.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 5, 8-11, and 15-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Lee et al. (U.S. 5,883,824).

Re claim 1, Lee et al. disclose in Figure 1 a method for averaging two pixel values (abstract) comprising: decoding an instruction (col. 8 lines 1-2); loading a plurality of first operands from a first input register (18 as X); loading a plurality of second operands from a second input register (14 as Y); producing an average (abstract lines 10-12) of one of the plurality of first operands and one of the plurality of second operands; and storing the average in an output register (16 as Z).

Re claim 2, Lee et al. further disclose in Figure 1 determining how many fields are in each of the first and second input registers (abstract lines 2-3 and col. 7 lines 64-67).

Re claim 3, Lee et al. further disclose in Figure 1 the producing the average comprises: producing a first intermediate result by adding one of the plurality of first operands to one of the plurality of second operands; and producing the average by shifting the first intermediate result to the right by one binary digit (col. 5 lines 5-10).

Re claim 5, Lee et al. further disclose in Figure 1 the producing the average before storing the average (output of ALU as average is inputted into 16).

Re claim 8, it has similar limitations cited in claim 1. Thus, claim 8 is also rejected under the same rationale as cited in the rejection of rejected claim 1.

Re claim 9, Lee et al. further disclose in Figure 1 the instruction is one of a plurality of instructions in a long instruction word (col. 8 lines 1-3 and lines 43-51).

Re claim 10, it has similar limitations cited in claim 2. Thus, claim 10 is also rejected under the same rationale as cited in the rejection of rejected claim 2.

Re claim 11, it has similar limitations cited in claim 3. Thus, claim 11 is also rejected under the same rationale as cited in the rejection of rejected claim 3.

Re claim 15, Lee et al. further disclose in Figure 1 the first input register comprises a plurality fields (abstract lines 2-4 and col. 7 lines 64-67).

Re claim 16, it has similar limitations cited in claim 5. Thus, claim 16 is also rejected under the same rationale as cited in the rejection of rejected claim 5.

Re claim 17, Lee et al. disclose in Figure 1 loading a third operand from an M field of the first input register (17); loading a fourth operand (19) from a B2 field of the second input register; producing a second average (10) of the third operand and the fourth operand; and storing (21) the second average in a C2 field of the output register.

Re claim 18, it is an apparatus claim of claim 1. Thus, claim 18 is also rejected under the same rationale as cited in the rejection of rejected claim 1.

Re claim 19, Lee et al. further disclose in Figure 1 module comprises: a plurality of adders respectively coupled to the first and second fields; and a plurality of shifters respectively coupled to the plurality of adders (Figure 1).

Re claim 20, Lee et al. further disclose in Figure 1 a rounding factor that causes at least one of rounding-up and rounding-down (col. 6 lines 60-68).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4, 6-7, 12-14, and 21 are rejected under 35 U.S.C. 103(a) as being obvious over Lee et al. (U.S. 5,883,824) in view of Gross (U.S. 6,512,523).

Re claims 4 and 6-7, Lee et al. disclose in Figure 1 producing a first intermediate result by adding one of the plurality of first operands, one of the plurality of second operands (abstract); and producing the average by shifting the first intermediate result to the right by one binary digit (col. 5 lines 5-13). Lee et al. do not disclose in Figure 1 a rounding factor as zero and one is added to the average. However, Gross discloses a method of determining an error while averaging (col. 1 lines 47-55) and a correction factor is determined to round up if error. Therefore, it would have been obvious application to a person having ordinary skill in the art at the time the invention is made to add a correction factor of 1 to make the sum become even prior shifting as seen in Gross's invention into Lee et al.'s invention because it would enable to produce an average operand with errorless.

Re claim 12, it has similar limitations cited in claim 4. Thus, claim 12 is also rejected under the same rationale as cited in the rejection of rejected claim 4.

Re claim 13, it has similar limitations cited in claim 6. Thus, claim 13 is also rejected under the same rationale as cited in the rejection of rejected claim 6.

Re claim 14, it has similar limitations cited in claim 7. Thus, claim 14 is also rejected under the same rationale as cited in the rejection of rejected claim 7.

Re claim 21, it has similar limitations cited in claim 6. Thus, claim 21 is also rejected under the same rationale as cited in the rejection of rejected claim 6.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. U.S. Patent No. 4,941,190 to Joyce discloses a method and system for enhancement of a digitized image.
- b. U.S. Patent No. 5,774,600 to Strongin et al. disclose a method of pixel averaging in a video processing apparatus.
- c. U.S. Patent No. 4,040,052 to Stanislaw discloses a digital video signal processing circuit.
- d. U.S. Patent No. 5,710,732 to Wong discloses a calculating the average of four integer numbers rounded away from zero in a single instruction cycle.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chat C. Do whose telephone number is (703) 305-5655. The examiner can normally be reached on M => F from 7:00 AM to 4:30 PM.

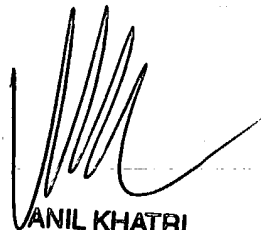
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chaki Kakali can be reached on (703) 305-9662. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chat C. Do
Examiner
Art Unit 2124

September 16, 2004



ANIL KHATRI
PRIMARY EXAMINER